The Farm and Industrial Equipment Industry Since 1886

Implement & Tractor

Service Feature

HELP WITH HYDRAULICS

Dealing With Fluid Contamination page 8

Crimping and Swaging page 10

FIEI Market Forecast Update page 14

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June 21, 1981 • Vol. 96 • No. 14

Implement & Tractor

The Business Magazine of the Farm and Industrial Equipment Industry

in this issue...

Service Feature

Help With Hydraulics

8: Five Ways to Deal With Fluid Contamination. The largest single cause of hydraulic systems malfunctions is contamination. Here are some methods to prevent it.

10: Do Hydraulic Hose Fittings You've Repaired Pop Off? The manufacture of hydraulic hose to closer diameter tolerances may require use of smaller ferrules and dies for swaging or a change to use of a crimping machine.

14: Market Optimism — Down, But Not Out. An update of the Farm & Industrial Equipment Institute's January outlook for the year may mean a lot of our troubles are behind us.

18: Finding a Buyer. A review of several types of services available to help the seller of a business. Part 3 of "Selling the Business."

20: End of a Dream. A young couple's dream of business ownership is cut short by many factors that confront farm equipment dealers today.

On the cover... Jeff Dunkin, left, of Olathe (Kan.) Ford Tractor, demonstrates use of a crimping machine for hydraulic hose fittings. Dave Whitham, top right, J I Case engineer, demonstrates a portable filter pump.

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RETAIL SALES OF WHEEL TRACTORS*

(In Units)

	Total Wheel Tractors†				Cumulative for Jan.-Mar., 1980				Cumulative for Jan.-Mar., 1981			
					Farm Type				Farm Type			
	Mar. 1980		Mar., 1981		2-Wheel	4-Wheel	Total		2-Wheel	4-Wheel	Total	
	Farm	Non-Farm	Farm	Non-Farm	Drive	Drive	Farm	Non-Farm	Drive	Drive	Farm	Non-Farm
Alabama	291	49	166	33	666	28	694	108	374	13	387	66
Alaska	2	....	2	2	3	....	3	2	6	....	6	13
Arizona	69	36	70	33	217	22	239	132	183	19	202	87
Arkansas	389	49	279	46	842	113	955	132	714	118	832	82
California	480	319	437	223	1,039	72	1,111	710	973	88	1,061	567
Colorado	118	56	127	51	214	49	263	166	255	53	308	121
Connecticut	10	17	23	14	40	....	40	51	34	1	35	33
Delaware	15	2	11	....	40	3	43	7	30	1	31	9
Florida	195	121	195	107	563	20	583	325	550	13	563	275
Georgia	352	58	276	53	899	20	919	112	656	9	665	124
Hawaii	2	5	11	9	12	....	12	34	17	3	20	18
Idaho	107	15	228	19	236	21	257	39	338	61	399	51
Illinois	387	78	472	66	1,327	182	1,509	196	999	202	1,201	166
Indiana	299	45	227	31	688	127	815	127	515	90	605	84
Iowa	497	33	518	18	1,681	156	1,837	70	1,332	158	1,490	43
Kansas	341	42	211	39	721	129	850	98	482	127	609	72
Kentucky	364	38	329	78	936	22	958	79	840	12	852	145
Louisiana	332	74	271	94	669	86	755	151	609	74	683	170
Maine	8	19	23	5	35	2	37	31	46	1	47	18
Maryland	78	32	32	51	161	17	178	66	93	9	102	98
Massachusetts	5	26	4	32	25	....	25	64	23	....	23	62
Michigan	164	101	164	71	506	48	554	213	420	74	494	165
Minnesota	411	57	418	26	846	141	987	104	862	150	1,012	74
Mississippi	411	28	268	29	913	88	1,001	77	583	70	653	77
Missouri	407	61	283	48	968	78	1,046	154	623	70	693	105
Montana	97	17	77	14	227	58	285	46	167	47	214	36
Nebraska	429	19	289	11	1,042	114	1,156	52	670	75	745	37
Nevada	13	14	14	12	23	4	27	33	28	....	28	24
New Hampshire	10	8	2	4	24	....	24	18	10	....	10	18
New Jersey	29	45	26	27	68	....	68	116	56	....	56	78
New Mexico	26	22	39	23	86	7	93	53	85	10	95	70
New York	156	69	167	67	442	19	461	192	395	33	428	167
North Carolina	338	59	275	44	802	13	815	163	713	11	724	126
North Dakota	175	8	196	4	331	169	500	17	323	192	515	13
Ohio	385	87	280	71	893	93	986	204	636	86	722	170
Oklahoma	237	64	163	69	534	78	612	139	363	56	419	177
Oregon	91	63	73	28	257	14	271	127	198	25	223	79
Pennsylvania	217	98	167	73	491	16	507	271	402	19	421	185
Rhode Island	....	9	....	6	4	....	4	15	2	....	2	13
South Carolina	164	32	99	32	400	15	415	79	271	6	277	76
South Dakota	177	14	136	6	397	66	463	27	311	66	377	16
Tennessee	308	54	231	39	754	25	779	100	565	21	586	86
Texas	732	411	712	407	2,316	152	2,468	907	1,891	122	2,013	853
Utah	49	47	44	47	102	3	105	94	157	9	166	74
Vermont	14	1	25	8	46	....	46	3	59	....	59	11
Virginia	199	84	148	40	503	7	510	181	323	5	328	112
Washington	166	40	137	31	370	29	399	96	289	50	339	63
West Virginia	21	19	31	12	77	....	77	31	65	....	65	37
Wisconsin	400	65	374	43	925	52	977	129	740	59	799	96
Wyoming	19	25	44	13	55	7	62	48	83	9	92	52
U.S. Government	2	39	3	14	26	....	26	251	4	....	4	32
Miscellaneous‡	33	8	9	30	117	....	117	166	46	....	46	116
TOTAL	**10,221**	**2,782**	**8,806**	**2,354**	**25,559**	**2,365**	**27,924**	**6,806**	**20,409**	**2,317**	**22,726**	**5,544**

Data released May 21, 1981, Farm & Industrial Equipment Institute.

*Figures do not include garden tractors, motor tillers or contractors off-highway types. Report includes units marketed by these firms: Allied Farm Equip. (Leyland, Satoh); Allis-Chalmers; Belarus; J I Case; Deere; Deutz; Ford; International Harvester; Long; Massey-Ferguson; R. M. Wade (Satoh); Steiger; Versatile; and White.

†The monthly sales are those reported for that month only. The cumulative totals are subject to revisions reflecting updating in the basic sales data.

‡Sales reported as miscellaneous are retail sales which cannot be classified by state or as U.S. Government. They include sales and dispositions that do not go through usual marketing channels such as gifts to non-profit organizations, intra-plant or company transfers, etc.

State-of-the-Industry 1981 Forecast Update:

MARKET OPTIMISM—DOWN, BUT NOT OUT

The outlook isn't as bright as it was in January, but it may mean that a lot of our troubles for the year are behind us. The big if: interest rates.

By Bill Fogarty

Cecil Stralow (Avco New Idea) delivered the report of the consensus forecast to the Marketing & Management Conference of the Farm & Industrial Equipment Institute. Figures in the forecast reflect the median response range of 49 producers of field machinery and 47 manufacturers of farmstead equipment. Respondents dealt only with products they manufacture and sell, and were asked to predict on an industry-wide basis, rather than individual company outlooks.

■EXPECTATIONS about the farm equipment industry's performance in 1981 compared with 1980 have come down, as indicated by the State-of-the-Industry update forecast delivered at the Marketing & Management Conference in late May. (The event is a function of the Farm & Industrial Equipment Institute.)

However, in view of the generally disappointing results noted in the first three and four months of 1981, the group's expectations are apparently for a fairly strong finish.

In other words, if tractor sales are off by 9.7 per cent through April of this year, compared with last year, and the expectation is for an improvement of 2.4 per cent, then the last eight months of the year should show great strength. Either that, or industry forecasters have overshot the mark again.

If they have, a principal culprit will be interest rates. In January, the group was expecting the prime rate to get down to 13 per cent by August. And in May, the rate was up around 20. When surveyed in April, participants in the outlook survey were of the opinion that the prime would hit 13 or 14 per cent by August or September.

Said Cecil Stralow (Avco New Idea): "Key factors influencing the less optimistic outlook include reduction in government support programs, continued rising inflation, high interest rates, low farm prices, low soil moisture and a strong potential for drought." Stralow presented the results of the group survey at the conference.

"Those who thought business may improve," he added, "listed these reasons: aggressive industry pricing actions, possible lower interest rates by harvest time and a pent up de-

SALES BACKGROUND, SALES OUTLOOK

(Retail sales of units, United States)

	Recent History		Forecasting 1981			
			In January		In May	
Product	1979 Actual	1980 Actual	Unit Sales	Pct. Change From 1980	Unit Sales	Pct. Change From 1980
Tractors						
Under 40 HP	49,297	46,742	47,000	+ 0.6	46,100	- 1.5
40-99 HP	65,002	58,191	61,500	+ 5.7	59,000	+ 1.5
100 HP and over	62,535	50,332	59,000	+17.2	52,442	+ 4.2
Four-Wheel Drive	11,455	10,886	11,600	+ 6.6	11,500	+ 5.6
Total	188,289	166,151	179,000	+ 7.7	170,100	+ 2.4
S-P Combines	32,246	25,722	29,500	+14.7	28,700	+11.5
Cornheads	22,374	17,785	19,400	+ 9.1	19,984	+16.5
Field Cultivators	16,951	14,500	16,775	+15.7	14,333	+ 5.0
Chisel Plows	15,345	14,000	15,250	+ 8.9	13,500	+12.7
Disk Harrows	63,185	51,800	57,500	+11.0	48,100	+ 3.7
Moldboard Plows	31,743	24,000	25,500	+ 5.3	24,000	- 0.4
Conventional Balers	18,750	14,005	14,750	+ 5.3	14,000	- 0.2
Big Balers	21,351	16,453	19,000	+15.5	18,000	+ 9.5
Mower-Conditioners	25,600	19,449	21,050	+ 8.2	20,500	+ 5.4
Forage Harvesters	12,451	9,453	10,650	+12.7	9,802	+ 3.6
Windrowers/Swathers	8,918	7,100	8,140	+14.6	7,500	+ 6.0
Cotton Strippers	1,774	1,650	1,950	+10.2	(not provided)	
Manure Spreaders	19,103	14,000	17,000	+21.4	15,249	+ 3.5
Grinder-Mixers	11,673	8,500	9,000	+ 5.9	8,300	- 2.0

Source: Farm & Industrial Equipment Institute, May, 1981.

AGRI-EQUIPMENT FORECASTS, 1981

(Per cent change, retail dollar volume)

Product	Jan., 1981	May, 1981
Portable augers, elevators	+ 5.0	0.0
Bin-type crop dryers	+ 2.0	0.0
Batch, continuous-flow dryers	+ 5.5	- 5.0
Farmstead equipment, dairy, beef	+ 5.0	0.0
Farmstead equipment, hogs	+ 10.0	+ 3.0
Grain bins	+ 3.5	- 5.0
Milking machines	+ 6.0	0.0

Source: Farm & Industrial Equipment Institute

mand for many products."

The FIEI's report on its spring outlook survey sums up: "All in all, the State of the Industry Update indicates manufacturers believe it will take most all of 1981 to recover from last year's precipitous declines in retail sales. They see any real turn-around being moved well into 1982."

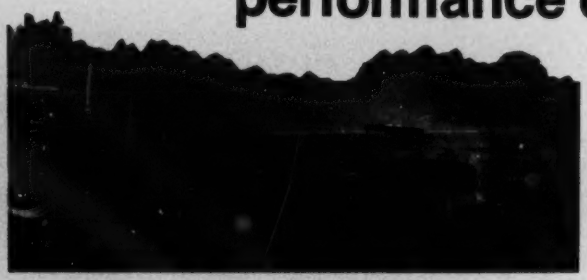
Long-range shifts

One part of the survey asked participants what they consider to be the important impact of the need to conserve energy and water on the farm. Respondents said:

"We see increases in solar energy for grain drying, heating farm buildings, use of animal waste for fertilizer and fuel...more use of alcohol as fuel"..."Reduced tillage, more minimum till"..."Acceptance of wind power back on the farm"..."More fuel-efficient engines for field equipment, new revolutionary fuels and engines"... "Changes to crops less sensitive to dry conditions"..."More water-conservative, low-pressure, energy-efficient irrigation equipment"... "Return to dry land farming in many areas of the High Plains as cost of lifting water prohibits irrigation..."

Said the FIEI report: "Often mentioned and underlying in many replies is the emergence of a new attitude. FIEI members predict farmers in many areas will see the end of the 'more is better' era. They think farms reach points of diminishing returns and that an age of 'optimum' agricultural production yielding the maximum level of profitability considering farm size and the costs of energy, water and many other variables will prevail." □

Midland's new generation of land forming equipment gives dependable performance day after day.



Midland 3010 / 3012 / 3014 Box Plane

The new Midland Box Plane incorporates two tools in one. Features include simplicity, precision and maneuverability. The rugged box scraper with its integral rockshaft and draw bar hitch can easily be detached from the frame and used on your tractor for terracing, drainage construction and other utility work.

The box plane is available in blade widths of 10, 12 and 14 feet. The rigid 31 foot frame and steel gauge wheels permit precision leveling with a 70 to 150 h.p. tractor.

Midland Tandem Scrapers

Midland farm scrapers load, carry, dump and spread with one hydraulic lever controlling all operations for each scraper. The scrapers feature all-welded construction, low blade angle for easier loading and the Midland Seal-Set hub. Sizes include 3½, 4½, 6 and 8-yard dolly and straight pole units. 11 and 14-yard push-off type scrapers are available in dolly models.

Midland manufactures the Big Power Line of Disk Harrows, Sub-Soilers, Chisel Plows, Scrapers, Box Scrapers and Land Levelers as well as Pasture Dreams, Zip Seeders, Northcote Precision Drills and Gopher Killers.

Midland Manufacturing Company

Division of Northcote Corporation
Electric Mills, Mississippi 39329 / (601) 476-8401
Telex: 504-156 / Answer Back MMCO ELML

FEMA

Circle (4) on Reply Card

RETAIL SALES OF SELECTED FARM EQUIPMENT – Jan.-Mar. 1980 and 1981(1)

(In Units)

	Combines Self-Propelled		Corn Heads		Hay Balers (2)		Windrowers Self-Propelled Power Units		Windrowers Self-Propelled Total Heads		Grinder-Mixers		Shear-Bar Forage Harvesters (3)	
	1980	1981	1980	1981	1980	1981	1980	1981	1980	1981	1980	1981	1980	1981
Alabama	32	23	6	4	15	30	1	.....	.....	.....	58	25	1	3
Alaska	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....
Arizona	9	28	.....	1	5	13	13	19	19	20	3	1	1	3
Arkansas	62	174	.....	1	28	29	.....	.....	.....	.....	33	23	2	2
California	50	68	4	9	26	47	63	84	68	96	.....	2	10	12
Colorado	31	56	14	17	23	26	17	23	19	21	35	19	9	5
Connecticut	.....	.....	.....	.....	8	2	.....	.....	.....	.....	.....	.....	4	3
Delaware	5	6	3	3	1	2	.....	.....	.....	.....	5	2	1	.....
Florida	9	9	4	5	14	15	.....	.....	.....	.....	19	7	7	2
Georgia	47	44	40	14	9	28	1	.....	1	.....	126	19	7	9
Hawaii	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....
Idaho	22	68	3	.....	33	42	37	42	35	43	18	8	6	3
Illinois	381	390	385	316	34	31	2	3	2	2	197	135	36	36
Indiana	266	215	265	197	27	35	4	1	4	.....	148	86	30	13
Iowa	499	373	453	342	42	46	12	18	12	17	566	357	82	47
Kansas	256	338	35	25	32	39	46	57	44	57	101	60	29	12
Kentucky	42	52	26	23	27	42	1	6	1	1	157	73	15	27
Louisiana	36	47	.....	.....	1	4	.....	.....	.....	.....	4	4	2	2
Maine	.....	.....	.....	.....	2	2	.....	.....	.....	.....	....	1	3	2
Maryland	22	14	16	21	10	14	1	1	1	1	12	9	9	7
Massachusetts	.....	.....	.....	.....	3	4	.....	.....	.....	.....	.....	.....	1	2
Michigan	86	70	70	55	24	19	3	4	3	4	82	63	50	39
Minnesota	234	221	187	148	80	92	41	54	41	57	250	176	74	66
Mississippi	59	67	.....	2	7	20	.....	.....	.....	.....	13	14	4	4
Missouri	173	140	94	44	48	38	8	2	8	2	232	124	14	17
Montana	37	81	1	.....	31	25	43	37	43	41	25	14	7	2
Nebraska	297	200	214	141	22	19	45	37	42	40	244	129	36	25
Nevada	.....	1	.....	.....	8	3	6	6	7	5	2	.....	1	.....
New Hampshire	.....	.....	.....	.....	5	7	.....	.....	.....	.....	.....	1	4	.....
New Jersey	3	3	5	4	.....	2	.....	.....	.....	.....	3	3	3	2
New Mexico	4	9	2	.....	9	16	8	9	8	9	3	3	.....	.....
New York	23	12	34	16	62	45	8	5	9	6	47	32	74	38
North Carolina	40	41	35	37	24	31	.....	.....	.....	.....	71	45	9	5
North Dakota	139	210	6	6	8	7	33	49	31	51	53	45	7	4
Ohio	215	148	146	122	45	62	2	1	2	1	166	93	34	31
Oklahoma	109	146	2	1	58	54	12	18	13	18	53	33	5	2
Oregon	18	38	3	2	40	33	14	22	16	26	12	7	3	8
Pennsylvania	35	23	44	16	90	71	5	8	7	7	106	83	82	40
Rhode Island	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
South Carolina	35	26	11	3	6	6	.....	.....	.....	.....	26	15	3	7
South Dakota	77	80	43	25	8	6	41	52	42	55	149	77	28	23
Tennessee	52	41	24	7	44	70	1	.....	1	.....	91	46	10	13
Texas	110	218	19	21	48	104	9	15	8	16	85	56	6	12
Utah	4	2	1	.....	19	18	15	14	15	14	16	3	7	3
Vermont	.....	.....	.....	.....	7	6	.....	.....	.....	.....	1	1	14	6
Virginia	21	10	14	8	45	42	3	.....	3	.....	38	18	17	13
Washington	41	61	2	4	26	20	22	19	19	21	10	2	9	12
West Virginia	.....	.....	.....	.....	14	19	.....	.....	.....	.....	11	4	.....	.....
Wisconsin	69	55	100	62	202	168	46	38	46	39	189	147	240	158
Wyoming	7	11	1	1	12	12	12	14	13	14	4	6	2	2
U.S. Government	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Miscellaneous (4)	.....	.....	.....	12	.....	...	.....	.....	.....	.....	.....	.....	.....	.....
TOTAL	**3,857**	**3,819**	**2,312**	**1,715**	**1,332**	**1,468**	**575**	**658**	**583**	**684**	**3,464**	**2,071**	**1,000**	**722**

Data released May 21, 1981, Farm & Industrial Equipment Institute.

(1) Includes revisions for prior months.

(2) For making bales of under 200 lbs.

(3) Pull-type, mounted, self-propelled.

(4) Sales reported as miscellaneous are retail sales which cannot be classified by state or as U.S. Government. They include sales and dispositions that do not go through usual marketing channels such as gifts to non-profit organizations, intra-plant or company transfers, etc.

Mower Conditioners All Types 1980	1981	Manure Spreaders Conveyor-Type 1980	1981	
9	11	8	4	Alabama
.....	1	.....	.....	Alaska
2	1	3	1	Arizona
45	42	35	30	Arkansas
3	10	12	20	California
5	15	22	19	Colorado
4	7	24	20	Connecticut
2	1	34	24	Delaware
8	12	8	4	Florida
30	32	17	10	Georgia
.....	.....	.....	.....	Hawaii
15	17	31	35	Idaho
62	92	220	200	Illinois
53	63	159	185	Indiana
112	148	543	519	Iowa
75	82	73	58	Kansas
127	115	92	89	Kentucky
10	7	5	6	Louisiana
4	7	23	10	Maine
14	9	85	56	Maryland
7	4	19	22	Massachusetts
47	59	270	243	Michigan
117	117	431	387	Minnesota
8	11	5	8	Mississippi
208	140	108	82	Missouri
16	22	7	6	Montana
83	77	151	61	Nebraska
2	1	5	1	Nevada
4	5	18	7	New Hampshire
9	1	21	12	New Jersey
.....	1	2	4	New Mexico
100	79	478	475	New York
36	37	60	35	North Carolina
7	11	20	17	North Dakota
101	91	324	288	Ohio
68	59	20	8	Oklahoma
29	30	29	18	Oregon
122	67	484	392	Pennsylvania
1	.....	.....	.....	Rhode Island
11	21	14	4	South Carolina
13	16	65	59	South Dakota
80	80	60	39	Tennessee
124	103	50	45	Texas
11	15	36	34	Utah
17	8	66	49	Vermont
95	61	88	49	Virginia
13	26	42	30	Washington
14	15	16	20	West Virginia
252	248	710	637	Wisconsin
3	5	8	9	Wyoming
.....	.....	.....	.....	U.S. Government
.....	.....	.....	.....	Miscellaneous
178	2,082	5,001	4,331	TOTAL

Take care of your customers: recommend a specialist.

As a Side-Winder dealer, you can provide the answer to any customer need. Because each piece of equipment in our full line is designed and built to do the job better. It's like having a team of specialists on call.

Yet our specialists are versatile. For example, the GB series of rotary cutters was engineered for farmers who wanted a removable hayside to windrow hay. But these models also cut stalks and brush and mow pastures.

Do you hear complaints about wire, twine or vines wrapping around blade spindles? Show your customers how Side-Winder solved that problem with an anti-wrap shield on the blade carrier. And point out that our cutters are reinforced on top, instead of underneath—for smoother material flow and better cleaning.

Help your customer diagnose his problem and decide which specialist he needs. A tire drive, multiple spindle or flail mower? A rotary ditcher or a hitch mounted blade?

Each is backed by FMC's longstanding reputation for innovation, durability, dependability, and quality. When you recommend Side-Winder, you know you're recommending the best!

For information on dealerships, write to FMC Agricultural Machinery, Box 818, Minden, LA 71055. FMC

Circle (5) on Reply Card

BEST AVAILABLE COPY

AUCTION PRICES OF USED EQUIPMENT

An exclusive I&T monthly report of actual prices paid recently at these leading national wholesale auctions.

Asterisk beside tractor price indicates highest bid offered on tractors which were not sold.

YODER & FREY, INC.
Archbold, Ohio
(May 11 & 12, 1981)

ALLIS-CHALMERS TRACTORS

7030 diesel, 1973 (Good)	8250*
7030 diesel, 1973 (Good)	7900*
7000 diesel, 1976 (Good)	8200*
210 diesel,	8000
210 diesel, 1968 (Fair)	6400*
200 diesel, 1972 (Good)	5950*
XT190, 1967 (Good)	5100
XT190, 1965 (Fair)	5100*
XT190, 1965 (Rough)	3800*
XT190, 1965 (Rough)	2450
170, ldr., 1972 (Good)	4500*
D17, 1968 (Fair)	1275*
D17, ldr., 1964 (Fair)	1500
D17, 1961 (Good)	1350*
D14, (Rough)	750
WD45, 1950 (Fair)	1000*
CA, mo., 1954 (Good)	1075
C, plow, cult., mo. (Fair)	450

DAVID BROWN TRACTORS

990 diesel,	1850
885 diesel, ldr., 1975 (Rough)	3750
885 diesel, 1977 (Good)	3525
880 diesel, (New)	5500*

CASE TRACTORS

1070 diesel, 1973 (Fair)	7000
1030 diesel, 1966 (Fair)	4250
970 diesel, 1973 (Fair)	5400*
930 diesel	4100
930,	3100
930 diesel, 1962 (Fair)	2400
830,	1500
730,	2350
730, 1964 (Fair)	2200
730 diesel, 1963 (Fair)	2100
430 diesel, 1963 (Rough)	1400*
310 diesel,	2500

JOHN DEERE TRACTORS

4430 diesel, (Good)	15,800
4430 diesel, 1973 (Good)	15,700
4430 diesel, (Good)	15,500*
4430 diesel, 1974 (Good)	15,400*
4430 diesel, (Fair)	14,900*
4430 diesel, 1973 (Good)	12,000
4430 diesel, (Fair)	10,800
5020 diesel, 1970 (Fair)	6900*
5020 diesel,	6400
4620 diesel, 1971 (Good)	8750*
4030 diesel, 1974 (Good)	13,100*
4020 diesel, 1970 (Good)	8500*
4020 diesel, 1970 (Fair)	7500*
4020 diesel, (Fair)	6500
4020, (Good)	4800
4010 diesel, 1963 (Fair)	4000*
4010 diesel, 1962 (Fair)	4350
4010 diesel, 1962 (Rough)	4200*
4010, 1961 (Fair)	3100*
3020, 1971 (Good)	5000
2010, 1964 (Good)	3150
2010, 1961 (Rough)	1200*
830 diesel, 1961 (Fair)	1900*
820 diesel, 1957 (Rough)	1700*
720, 1957 (Fair)	1425
530, 1957 (Rough)	1425
310, backhoe, ldr., (Good)	9900*
300, backhoe, ldr., (Fair)	5100*
70, 1954 (Fair)	1100*
60, 1954 (Fair)	885
50, 1953 (Fair)	900
MT, (Fair)	1085
M, cult., 1950 (Fair)	1210

FORD TRACTORS

9600 diesel, (Rough)	6000*
8000 diesel, 1970 (Rough)	4400
8000 diesel, 1969 (Fair)	5000*
6000 diesel, 1967 (Good)	1125
5500, backhoe, ldr., (Good)	6150
4600, 1980 (Excellent)	7000*
4500, (Good)	6100
4000, ldr., 1973 (Good)	4500*
4000, ldr., 1973 (Good)	4400*
4000, ldr., 1971 (Fair)	2850
4000, 1957 (Fair)	1450
3600, (New)	7600*
3600 diesel, (New)	7400*
3400, ldr., 1970 (Rough)	3100
3400, 1970 (Fair)	2800*
3000, 1970 (Fair)	4400*
3000, 1969 (Rough)	1900
2000 diesel, 1971 (Fair)	2750
900, 1956 (Rough)	1050*
841, 1954 (Good)	2750
841, ldr., 1954 (Fair)	2275
640, ldr., 1956 (Fair)	2000*
601, 1955 (Fair)	1700
600, 1966 (Fair)	1425*
541, cult., 1954 (Rough)	1400*
Jub., 1953 (Fair)	1675
8N, 1952 (Good)	1800
8N, 1951 (Fair)	1125
8N, 1950 (Good)	1650
8N, 1949 (Fair)	1050*
8N, 1949 (Fair)	975
8N, 1947 (Rough)	950
9N, 1945 (Fair)	1120
9N, 1945 (Good)	1050
9N, 1945 (Fair)	800

INTERNATIONAL HARVESTER TRACTORS

3588 diesel, (Good)	36,000*
1586 diesel, 1973 (Good)	12,500*
1586 diesel, 1976 (Good)	11,500*
1206 diesel, 1966 (Good)	5200*
1086 diesel, (Good)	16,750*
1086 diesel, 1973 (Good)	9260
1086 diesel, hydro., 1973 Rough	5750*
986 diesel, (Good)	10,000
986 diesel, 1973 (Fair)	9000
986 deisel, 1972 (Good)	8000*
986 diesel, duals, 1977 (Excellent)	17,500
856 diesel, 1970 (Fair)	7350
856 diesel, 1970 (Fair)	7350*
856 diesel, 1970 (Rough)	5000*
856 diesel, 1968 (Good)	6000*
806, 1965 (Fair)	4825
806 diesel, 1965 (Fair)	4550*
806, 1965 (Fair)	4150*
806 diesel, 1963 (Fair)	4850*
766 diesel, 1973 (Good)	7700*
766 diesel, 1972 (Fair)	7400*
706, 1966 (Fair)	1650*
656, 1968 (Fair)	3400*
656, ldr., 1966 (Fair)	2800*
606, ldr., 1962 (Fair)	3250
560 diesel, 1959 (Fair)	2000*
560, 1960 (Rough)	1375
560, 1961 (Fair)	1300*
504, 1962 (Good)	2300*
460, 1961 (Rough)	850*
400, (Good)	2000
400, 1956 (Rough)	1050
400, ldr.,	1000
200, plow, cult.,	1850
200, 1956 (Rough)	975
Sup. MTA, 1954 (Good)	1425
Sup. M, (Good)	1250
Sup. MTA, 1952 (Fair)	1050*
M, 1951 (Fair)	825
M, 1950 (Fair)	800
M, 1950 (Fair)	685
H,	785
H, 1950 (Fair)	585
A, 1952 (Rough)	1000
Sup. A, mo., 1947 (Fair)	1050
Cub 185, mo., 1976 (Good)	2400*
Cub 154, (Fair)	1550
Cub 154, (Good)	2375
Cub 154, mo.,	2300
Cub Loboy, mo.,	1800

MASSEY-FERGUSON TRACTORS

2135 diesel, 1972 (Rough)	2100*
1805 diesel, (Good)	11,500*
1085, 1972 (Fair)	7200*
1080 diesel, 1970 (Fair)	4100
230, (New)	7000*
180 diesel, 1968 (Rough)	2450
165, 1970 (Fair)	3300*
165, 1970 (Rough)	2700*
150, 1967 (Good)	3000
135, ldr., 1970 (Good)	3500
135 diesel, 1970 (Rough)	2300*
135,	2075
85, (Rough)	1000
65, 1960 (Fair)	2500
65 diesel, 1960 (Fair)	2350*
65,	1800
50, ldr., 1960 (Good)	2725
50,	2150
35, 1956 (Fair)	2150*

OLIVER TRACTORS

1950 turbo,	5800
1800, 1962 (Fair)	3000*
1850, 1966 (Fair)	2550
1800, 1962 (Fair)	2500*
1850, 1963 (Fair)	2500*
1600, 1962 (Fair)	1925
1550, 1964 (Fair)	2200*
880 diesel, 1957 (Fair)	750
770,	1025
77 diesel, 1958 (Rough)	500

MINNEAPOLIS-MOLINE TRACTORS

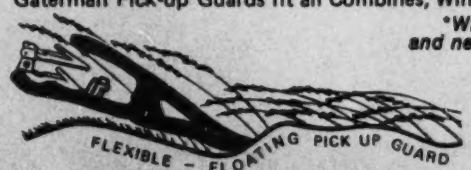
G1350, 1968 (Fair)	3500*

LET Gaterman GUARD YOUR HARVEST

● PICK UP EXTRA BUSHELS

FLEXIBLE – FLOATING PICK UP GUARDS follow the uneven ground lifting up low hanging pods and grain heads above the cutterbar without the sickle guards digging in the ground and picking up stones. While Automatic Header Controls, Floating and Flexible Cutterbars have advantages over regular cutterbars, Pick Up Guards must be used to save all pods and grain heads in Standing, Row Crop, Lodged or Windrowed crops. Gaterman Pick-up Guards fit all Combines, Windrowers and Pea Harvesters.

*Write for Literature and nearest Distributor



FEMA

GATERMAN MFG. CO., INC. P.O. Box 587 Manitowoc, WI 54220 Phone 414 682-8108

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VERSATILE TRACTOR
750, 1979 (Good) 29,000*

JONES FARM EQUIPMENT CO. Dothan, Alabama (May 12, 1981)

ALLIS-CHALMERS TRACTORS
7040 diesel, cab, 1976 (Good) 9000*
190 diesel, 1967 (Fair) 3000*
D17 diesel, 1959 (Fair) 775

CASE TRACTORS
930 diesel, 1961 (Fair) 1900
600 diesel, 1958 (Fair) 1400

DEUTZ TRACTOR
13006 diesel, cab, 1974 (Good) 6950

MASSEY-FERGUSON TRACTORS
1100 diesel, 1966 (Rough) 2700*
1080 diesel, 1972 (Good) 3800*
265 diesel, 1979 (Excellent) 8500*
245 diesel, 1976 (Good) 5700*
230 diesel, 1979 (Excellent) 6800*
180 diesel, 1966 (Excellent) 3500*
165 diesel, 1967 (Good) 3250*
165 diesel, 1967 (Good) 3300
135 diesel, 1971 (Good) 2900
135 diesel, 1968 (Good) 2900*
65 diesel, 1963 (Good) 2150
65 diesel, 1960 (Good) 2000
65 diesel, 1960 (Good) 1800*
65 diesel, 1959 (Good) 2350*
50A- diesel, idr., backhoe, 1975 (Good) 4750
50 diesel, 1964 (Good) 1950*
50, 1958 (Good) 1900
35, 1960 (Good) 1900*
35, 1959 (Fair) 1200*
35, 1959 (Good) 1650*
35, 1956 (Fair) 1225*
35, 1956 (Good) 1900
T030, 1954 (Good) 1100*
T020, 1949 (Good) 850
T020, 1949 (Excellent) 1500

FORD-FERGUSON TRACTORS
9N, 1946 (Good) 825*
9N, 1944 (Rough) 525*

FORD TRACTORS
8600 diesel, 1975 (Good) 8200*
8000 diesel, 1971 (Fair) 3700*
7600 diesel, 1977 (Good) 7800
7000 diesel, 1974 (Good) 6300*
5000 diesel, 1969 (Fair) 3500*
4500 diesel, idr., backhoe, 1969 (Fair) 4000
4000 diesel, 1970 (Good) 4500
3600 diesel, 1978 (Good) 6000
3400 diesel, 1970 (Fair) 1950*
3000 diesel, 1968 (Good) 3700
3000 diesel, 1966 (Fair) 2400
2000, 1968 (Good) 3000
850, 1955 (Good) 1950*
841, 1958 (Good) 2200
841 diesel, 1958 (Good) 1700*
641, 1959 (Good) 1800*
641, 1958 (Good) 1875
641, 1958 (Good) 1950
640, 1956 (Good) 1700*
640, 1956 (Fair) 1250
640, 1955 (Good) 1900*
640, 1955 (Fair) 1200*
420 diesel, idr., 1978 (Excellent) 10,500
Sup. Dex., 1962 (Excellent) 1600
Dexta, 1959 (Good) 1200
Jub., 1953 (Good) 1550*
8N, 1952 (Good) 900
8N, 1950 (Excellent) 1300
8N, 1948 (Good) 900
8N, 1948 (Excellent) 1400
8N, 1948 (Rough) 675
8N, 1948 (Rough) 775
8N, 1948 (Fair) 800

INTERNATIONAL HARVESTER TRACTORS
806 diesel, 1969 (Excellent) 5500
806 diesel, duals, sprayer, 1964 (Good) 4600*
574 diesel, 1972 (Good) 3300*
574 diesel, 1972 (Good) 3200*
504 diesel, 1966 (Rough) 1250
504 diesel, 1964 (Fair) 2300*
504 diesel, 1963 (Rough) 1000
460 diesel, 1960 (Rough) 600
2444, 1968 (Fair) 1500
444 diesel, 1968 (Fair) 2000
Sup. A, cult., 1953 (Excellent) 2150*
Sup. A, d[illegible]low, 1952 (Good) 1100
Cub, mo., 1951 (Excellent) 1775

JOHN DEERE TRACTORS
4020 diesel, 1970 (Good) 6550
4020 diesel, 1968 (Fair) 5000
4020 diesel, 1966 (Fair) 5100*
3020 diesel, 1969 (Excellent) 5700*
2520 diesel, 1970 (Excellent) 6450
2030 diesel, 1974 (Good) 4200
2020 deisel, 1966 (Good) 3850*
2020 diesel, 1966 (Fair) 3250
2010 diesel, idr., backhoe, 1962 (Fair) 2100*
1010, 1962 (Fair) 1600*
1010, 1962 (Fair) 1650
430, 1960 (Good) 1250
40, 1954 (Fair) 700
40, 1954 (Fair) 725*

LONG TRACTOR
384 diesel, 1972 (Fair) 1750

OLIVER TRACTORS
1855 diesel, 1973 (Good) 5250
1755 diesel, 1972 (Good) 4500
1755 diesel, 1972 (Good) 5100*
1650 diesel, 1967 (Fair) 2000

Prices reported are for individual sales at wholesale on "as is," "cash and carry" basis.
Prices reported are NOT averages.

Condition classifications: EXCELLENT means—Engine: in perfect condition, 400 to 600 hours of use; Rubber: 80% tread remaining, no breaks or cracks; Paint: original and bright; General Appearance: excellent.

GOOD means—Engine: good running condition; Rubber: 70% tread remaining, no breaks or cracks; Paint: original paint or a good repaint job; General Appearance: good over-all.

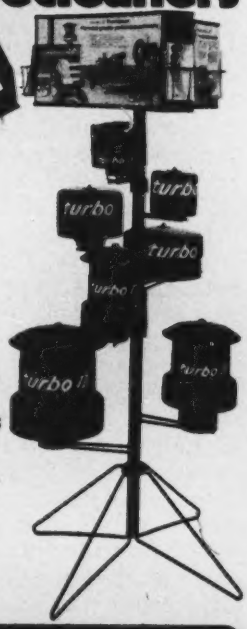
FAIR means—Engine: possibly in need of a minor overhaul to restore; Rubber: 60% tread remaining, some cracking evident in side walls; Paint: only fair, weathered and some rust apparent; General Appearance: worn, some dents, minor parts such as gage covers missing or broken.

ROUGH means—Engine: obviously in need of a major overhaul; Rubber: smooth; Paint: scarred, weathered, rusty, needs painting urgently; General Appearance: dents, ruptures, broken parts, loose wires, some components such as lights broken, missing or inoperative.

DEMONSTRATOR means—used for demonstrating only and in practically new condition.

turbo Precleaners

The No. 1 PRECLEANER



Eliminates up to 99% of dust, dirt, chaff, rain and snow!

- Extends filter life up to 10 times longer.
- Extends engine life.
- No exhaust connections.

Traffic stopping display moves precleaners off the shelf.

- Free merchandising aids.
- Advertising in leading farm publications.
- Full one year or 3,000 hour warranty.

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So many repairmen have requested these seven articles that we're now making them available to you in reprint form.

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